CLAIMS

1. (Currently Amended) A method, comprising:

determining, by a computing device, whether two or more samples of a presentation are processed by a first component of a pipeline at an expected time, the two or more samples comprising a first sample and a later processed second sample, wherein the determining comprises determining a first timing error for the first sample and a second timing error for the second sample; and

requesting, by the computing device, a second component of the pipeline to alter the manner in which the second component processes a portion of the presentation when the two or more samples are not processed at the expected time and when the first timing error is greater than the second timing error, the altering including reducing a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation, wherein the portion of the presentation comprises at least one succeeding sample to the two or more samples.

2. (Original) A method as recited in claim 1, wherein the first component comprises a media sink.

3. (Original) A method as recited in claim 1, wherein the second component comprises a codec.

4. (Original) A method as recited in claim 1, wherein the first component comprises a media sink and the second component comprises a codec.

5. (Canceled).

6. (Canceled).

7. (Original) A method as recited in claim 1, wherein the portion of the presentation comprises a frame.

8. (Previously Presented) A method as recited in claim 1, wherein determining whether the two or more samples are processed at the expected time comprises comparing a timing value in each of the two or more samples to a predetermined time frame associated with the presentation.

9. (Previously Presented) A method as recited in claim 1, wherein determining whether the two or more samples are processed at the expected time comprises comparing a timing value in each of the two or more samples to a presentation clock.

10. (Previously Presented) A method as recited in claim 1, wherein determining whether the two or more samples are processed at the expected time comprises determining whether a respective timing value in the two or more samples was processed by the first component at the time specified by the respective timing value.

11. (Previously Presented) A method as recited in claim 1, wherein determining whether the two or more samples are processed at the expected time comprises determining whether a respective timing value in each of the two or more samples was processed by the first component within a given time of a time specified by the respective timing value.

12. (Previously Presented) A method as recited in claim 1, wherein determining whether the two or more samples are processed at the expected time comprises determining if the first sample is processed by the first component at a first expected time and determining if the second sample is processed by the first component at a second expected time.

13. (Previously Presented) A method as recited in claim 1, wherein determining whether the two or more samples are processed at the expected time comprises:

determining the first timing error as a difference between a time at which the first sample is processed by the first component and a time at which the first sample is expected to be processed; and

determining the second timing error as a difference between a time at which the second sample is processed by the first component and a time at which the first sample is expected to be processed.

14. (Previously Presented) A method as recited in claim 1, wherein the first

sample comprising an associated first timing value and the second sample comprises an associated second timing value and wherein determining whether the two or more samples are processed at the expected time further comprises determining whether the first timing value more closely corresponds to a time at which the first sample is processed by the first component than the second timing value corresponds to a time at which the second sample is processed by the first component.

15. (Previously Presented) A method as recited in claim 1, wherein altering the manner in which the second component processes the portion of the presentation comprises dropping the at least one succeeding sample.

16. (Previously Presented) A method as recited in claim 1, wherein the portion of the presentation comprises a plurality of frames, wherein altering the manner in which the second component processes the portion of the presentation comprises dropping a subset of the plurality of frames, wherein the subset comprises two or more frames.

17. (Original) A method as recited in claim 1, wherein the first component is a media sink, the second component is a codec, and the wherein altering the manner in which the second component processes a portion of the presentation comprises dropping at least one frame of the presentation.

18. (Previously Presented) A method as recited in claim 1, wherein:

the pipeline comprises a media source, a media sink, and a topology of media

processing nodes;

the first component is a node in the topology; and

the second component is the media sink.

19. (Previously Presented) A method as recited in claim 1, wherein:

the pipeline comprises a media source, a media sink, and a topology of media processing nodes;

the first component is a node in the topology including a codec; and

the second component is the media sink.

20. (Currently Amended) A method, comprising:

determining, by a computing device, if timeliness of sample processing in a multi-component pipeline is degrading, the determination being made based on processing times of a first sample and a second sample of a presentation, the determination comprising calculating a first timing error for the first sample and a second timing error for the second sample;

altering, by the computing device, the manner in which a component in the multi-component pipeline processes a portion of the presentation when the timeliness of the sample processing is determined to be degrading, the altering including reducing a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation, wherein the portion comprises one or more succeeding samples to the first sample and the second sample.

21. (Previously Presented) A method as defined in claim 20, wherein the processing times of the first and the second samples are determined relative to a single component in the multi-component pipeline.

22. (Previously Presented) A method as defined in claim 20, wherein the processing times of the first sample is determined relative to a first component in the multi-component pipeline and the processing times of the second sample is determined relative to a second component in the multi-component pipeline.

23. (Previously Presented) A method as defined in claim 20, wherein the processing times of the first and the second samples are determined using timing information in the first and the second samples.

24. (Previously Presented) A method as defined in claim 20, wherein the processing times of the first and the second samples are determined using timing information in the first and the second samples and a presentation clock.

25. (Previously Presented) A method as defined in claim 20, wherein the timeliness of the sample processing is determined based on:

a first timing difference between a time specified in a timing value in the first sample and a time that the first sample is processed by the component in the multi-component pipeline;

a second timing difference between a time specified by a timing value in the

second sample and a time that the second sample is processed by the component in the multi-component pipeline.

26. (Previously Presented) A method as defined in claim 20, wherein the timeliness of the sample processing is determined based on:

the first timing error being a difference between a time specified in a timing value in the first sample and a time that the first sample is processed by a first component in the multi-component pipeline; and

the second timing error being a difference between a time specified by a timing value in the second sample and a time that the second sample is processed by a second component in the multi-component pipeline.

27. (Previously Presented) A method as defined in claim 20, wherein the timeliness of the sample processing is determined by:

determining the first timing error being a difference between a time specified in a timing value in the first sample and a time that the first sample is processed by the component in the multi-component pipeline;

determining the second timing error being a difference between a time specified by a timing value in the second sample and a time that the second sample is processed by the component in the multi-component pipeline, wherein the second sample is processed at a later time than the first sample; and

determining that timeliness of sample processing is degrading if the second timing error is greater than the first timing error.

28. (Previously Presented) A method as defined in claim 20, wherein the timeliness of the sample processing is determined by:

determining the first timing error being a difference between a time specified in a timing value in the first sample and a time that the first sample is processed by a selected component in the multi-component pipeline;

determining the second timing error being a difference between a time specified by a timing value in the second sample and a time the second sample is processed by the selected component, wherein the second sample is processed at a later time than the first sample; and

determining that timeliness of sample processing is degrading if the second timing error is greater than the first timing error.

29. (Previously Presented) A method as defined in claim 20, wherein altering the manner in which the component in the multi-component pipeline processes a portion of the presentation comprises instructing the component to drop the one or more succeeding samples.

30. (Previously Presented) A method as defined in claim 20, wherein altering the manner in which the component in the multi-component pipeline processes the portion of the presentation comprises instructing the component to drop each sample in a frame of the presentation.

31. (Original) A method as defined in claim 20, wherein each component

comprises processor executable instructions executed by a processor.

32. (Currently Amended) A system, comprising:

memory;

one or more processors;

a plurality of sample processing components operably connected to form a pipeline operable to process samples of a presentation; and

a quality manager configured to monitor sample processing times in the pipeline and, based on the monitored sample processing times, controls further configured to control a manner in which at least one of the sample processing components processes a subsequent portion of the presentation, the controlling a manner in which at least one of the sample processing components processes a subsequent portion of the presentation including reducing a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation,

wherein the quality manager controls the manner in which at least one of the sample processing components processes the subsequent portion of the presentation by identifying a difference between a first timing error for a first sample and a second timing error for a second sample and determining that the sample processing times are degrading when the second timing error is greater than the first timing error.

33. (Previously Presented) A system as recited in claim 32, wherein the at least one of the sample processing components comprises a media sink, and wherein

the quality manager monitors sample processing times at the media sink.

34. (Previously Presented) A system as recited in claim 32, wherein controlling the manner in which the at least one of the sample processing components processes the subsequent portion of the presentation comprises instructing the at least one of the sample processing components to drop one or more samples of the subsequent portion of the presentation.

35. (Previously Presented) A system as recited in claim 32, wherein controlling the manner in which the at least one of the sample processing components processes the subsequent portion of the presentation comprises instructing the at least one of the sample processing components to drop all of the samples of a frame of the subsequent portion of the presentation.

36. (Previously Presented) A system as recited in claim 32, wherein the quality manager controls the manner in which at least one of the components processes the subsequent portion of the presentation based on two or more samples of the presentation.

37. (Previously Presented) A system as recited in claim 32, wherein the quality manager monitors sample processing times at a first sample processing component and, based on the monitored sample processing time at the first sample processing component, controls the manner in which a second sample processing

component processes the subsequent portion of the presentation.

38. (Previously Presented) A system as recited in claim 32, wherein the quality manager monitors sample processing times at a sink component and, based on the monitored sample processing time at the sink component, controls the manner in which a codec component processes the subsequent portion of the presentation.

39. (Previously Presented) A system as recited in claim 32, wherein the quality manager monitors the processing times of two samples at a sink component and, based on the monitored sample processing times of the two samples at the sink component, requests that the codec component drop at least one frame of the presentation.

40. (Previously Presented) A system as recited in claim 32, further comprising a presentation clock associated with the presentation, wherein the quality manager monitors sample processing times in the pipeline relative to the presentation clock.

41. (Previously Presented) A system as recited in claim 32, further comprising a presentation clock associated with the presentation, wherein a plurality of the samples of the presentation comprise associated timing information, and wherein the quality manager monitors sample processing times in the pipeline by comparing the timing information of the samples to the presentation clock.

42. (Currently Amended) A computer-readable medium having computer executable instructions that, when executed by one or more processors, cause the instructions to perform acts comprising:

determining a first timing value associated with a first sample of a presentation being processed by a first component in a pipeline;

determining a second timing value associated with a second sample of a presentation being processed by the first component in the pipeline;

determining if the first and second samples are on time by comparing the timing value for each of the first and the second sample to a presentation clock associated with the presentation to determine if the first and second timing values indicate degrading timeliness; and

requesting a second component in the pipeline to drop one or more subsequent samples of the presentation, to reduce a quality of video filtering of the presentation, and to reduce a quality of audio decoding of the presentation when the timeliness is degrading.

43. (Previously Presented) A computer-readable medium as recited in claim 42, wherein the timing value is included in the sample.

44. (Previously Presented) A computer-readable medium as recited in claim 42, wherein the first component is a sink component.

45. (Previously Presented) A computer-readable medium as recited in claim

42, wherein the second component is a codec.

46. (Previously Presented) A computer-readable medium as recited in claim 42, wherein the first component is a sink component and the second component is a codec.

47. (Currently Amended) A computer-readable medium having computer executable instructions that, when executed by one or more processors, cause the instructions to perform acts comprising:

determining timing information associated with at least two samples of a presentation processed by a first component in a pipeline;

determining if the sample timing is degrading by comparing the timing information associated with the at least two samples to a presentation clock associated with the presentation, the determining further comprising determining a difference between a first timing error for a first sample and a second timing error for a second sample; and

instructing at least one component in the pipeline to alter a manner in which the at least one component processes a portion of the presentation when the sample time is degrading, the altering including reducing a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation, and the sample time being degrading when the second timing error is greater than the first timing error, wherein the portion comprises two or more samples.

48. (Previously Presented) A computer-readable medium as recited in claim

47, wherein the timing information are included in the samples.

49. (Previously Presented) A computer-readable medium as recited in claim 42, wherein the first component is a sink component.

50. (Previously Presented) A computer-readable medium as recited in claim 42, wherein the at least one component is a codec.

51. (Previously Presented) A computer-readable medium as recited in claim 42, wherein the first component is a sink component and the at least one component is a codec.

52. (Previously Presented) A method as recited in claim 1,

wherein the portion of the presentation comprises a third sample and a fourth sample.

53. (Previously Presented) A method as recited in claim 13, further comprising:

if the second timing error is greater than the first timing error, further requesting the second component of the pipeline to alter the manner in which the second component processes the portion of the presentation, wherein the portion of the presentation comprises two or more succeeding samples to the at least one sample.

54. (Previously Presented) A method as recited in claim 53,

wherein the two or more succeeding samples to the at least one sample are not consecutive samples.

55. (Previously Presented) A method as recited in claim 20,

wherein the portion of the presentation comprises a third sample and a fourth sample.

56. (Previously Presented) A method as recited in claim 28, further comprising:

if the timeliness of the sample processing is degrading, further altering the manner in which the component processes the portion of the presentation, wherein the portion of the presentation comprises two or more succeeding samples to one or more of the first sample and the second sample.

57. (Previously Presented) A method as recited in claim 56,

wherein the two or more succeeding samples to the at least one sample are not consecutive samples.